



## 2005 Iowa Rabies Summary

Although rabies is a rare disease in the United States, it is a common disease in many other countries around the world. The animal reservoirs for rabies virus vary around the world and within the United States. In Iowa and the Central United States, skunks are the primary reservoir for rabies virus, and on the East Coast raccoons are the primary reservoir. Several species of bats are also reservoirs for rabies virus throughout the Americas including the United States, and Central and South America. In Africa, Asia, and Latin America, wild canine species, in addition to wild and domestic dogs, are still the primary animal reservoirs for rabies virus. Due to the widespread use of rabies vaccination of dogs and effective animal control measures since the 1950's, the canine strain of rabies has been eradicated from the United States.

During 2005, a total of 108 cases of animal rabies were reported in Iowa. **Ninety-three (86%) were wildlife species and included 60 bats and 33 skunks.** The remaining fifteen positive animals (14%) were various domestic animal species and included five cats, one horse, two dogs, and seven bovines (cattle).

In animals the clinical signs of rabies may be exhibited in two different "forms". One form is the "furious" or aggressive form. With this form, the animal becomes very restless, excitable, aggressive, and often will attack and bite. The furious form of rabies is still the most common form in canines (dogs, coyotes, foxes) worldwide. This was the type portrayed in the movie "Old Yeller". In the United States, however, the "furious" form occurs most often in wildlife species (skunks, raccoons, coyotes, foxes), cats, and occasionally horses. All five of the rabies positive cats in Iowa exhibited the "furious form" of rabies, were **not vaccinated**, and lived in outdoor, rural / farm environments.

The other form of rabies is the "dumb" or paralytic form. With this form the animal becomes extremely mentally depressed, experiences paralysis of the jaw and throat muscles, may appear to be choking, and usually cannot eat or bite. This form occurs most often in livestock (cattle, sheep, goats), and is now the common form of rabies seen in dogs in the United States. The one horse, two dogs, and seven bovines that were positive for rabies in Iowa all exhibited the "dumb" form of rabies, were **not vaccinated**, and also lived in outdoor, rural / farm environments.

It is very important for all Iowans who own livestock and domestic animals to have their animals properly vaccinated against rabies and keep their animals' rabies vaccination current. Owners should consult with their veterinarian for a rabies vaccination and / or booster if their livestock or domestic animals are exposed to wildlife such as skunks or bats. The occurrence of rabies in domestic animals that are properly and currently vaccinated is rare. Vaccinating domestic animals against rabies reduces human exposure to the rabies virus from contact with domestic animals.

### Promoting and protecting the health of Iowans

Determination and assessment of rabies exposure is based on national guidelines established by the Centers for Disease Control and Prevention which includes:

- **Bite Exposure:** an animal (bat, skunk, raccoon, dog, cat, horse, cow) has bitten a person.
- **Non-bite Exposure:** saliva contact from an animal to an open, fresh, bleeding wound or cut; or saliva contact to a person’s eyes, nose, or mouth (mucous membranes).
- **Possible Exposure:**
  - Waking up to find a bat in your room. **Only the individual(s) asleep in the room where the bat is sighted are considered possibly exposed.**
  - Sighting a bat in the room of a mentally impaired or intoxicated person.
  - Sighting a bat in the room of an unattended child.
  - Sighting a bat in the room of someone who cannot communicate whether or not they were bitten by the bat, or whether or not they had direct contact with the bat.

**The Iowa Dept. of Public Health is available for consultation for rabies exposure assessment and post-exposure prophylaxis recommendations 24 / 7. During normal business hours, contact Dr. Susan L. Brockus, State Public Health Veterinarian, at 515-281-4933; and after hours by calling 800- 362-2736 for referral to the on-duty officer.**

Information on rabies is available on IDPH’s website in the Epi Manual at:

[http://www.idph.state.ia.us/adper/common/pdf/epi\\_manual/rabies.pdf](http://www.idph.state.ia.us/adper/common/pdf/epi_manual/rabies.pdf) and rabies exposure assessment flow charts are available at:

[http://www.idph.state.ia.us/adper/common/pdf/cade/rabies\\_exposure\\_all\\_animals.pdf](http://www.idph.state.ia.us/adper/common/pdf/cade/rabies_exposure_all_animals.pdf) and

[http://www.idph.state.ia.us/adper/common/pdf/cade/rabies\\_exposure\\_bats.pdf](http://www.idph.state.ia.us/adper/common/pdf/cade/rabies_exposure_bats.pdf)

The CDC also has a website on rabies available at: <http://www.cdc.gov/ncidod/dvrd/rabies/>

During 2005, one human case of rabies was reported in the United States. The patient was a 12-year-old boy who lived in Mississippi, and was hospitalized for encephalitis of unknown cause in September 2005. This was the first case of human rabies in Mississippi since 1956. Bats are the only known animal reservoir for rabies in Mississippi. An investigation conducted by public health authorities and the CDC determined the child had found a live bat in his bedroom in the spring of 2005 and removed it. It is most likely the bat bit the child while he was asleep during the previous night, or when he picked it up and removed it. This case is an unfortunate reminder to follow the CDC’s criteria for proper evaluation of human encounters with bats to determine whether there has been a rabies exposure that meets the criteria for administration of rabies post exposure prophylaxis. The current rabies post exposure prophylaxis protocol has been used for over twenty years, is very successful, and has minimal adverse affects. **Since 1979, there have been no treatment failures in the U.S. when rabies post exposure prophylaxis is administered promptly and appropriately.**

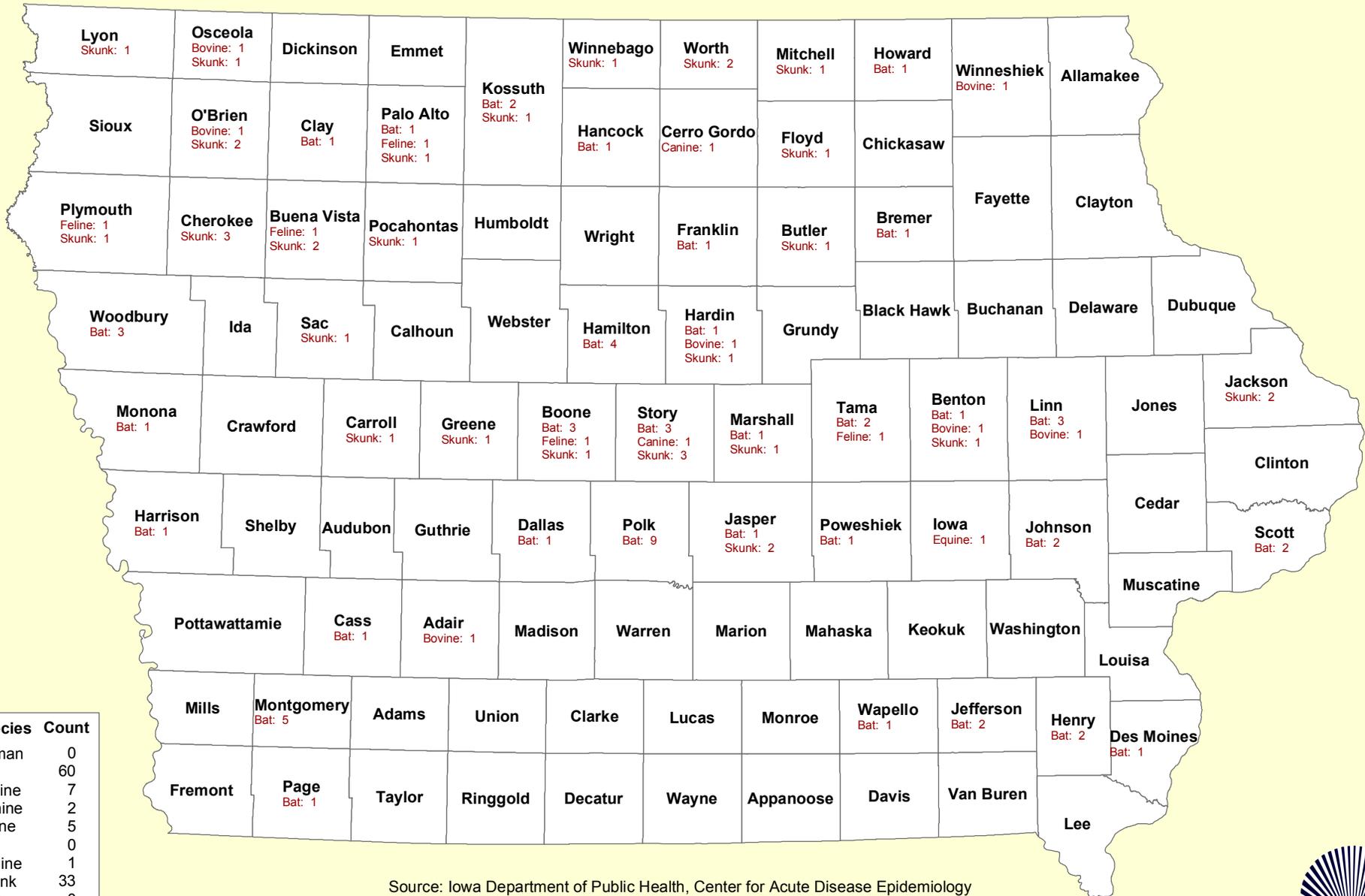
Human Rabies Cases U.S. 1990-2005	
• Organ donor recipients (2004)	= 4
• Bat-associated	= 33
• Raccoon-associated	= 1
– VA 2003	
• U.S. Carnivore-associated	= 1
– TX 1994	
• Foreign carnivore-associated	= 9
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• Total cases by source	= 48

Human Rabies Cases: Bats U.S. 1990-2005	
• Mexican free-tail	= 7
• Silver-hair / Eastern pipistrelle	= 20
• Big Brown	= 1
• Myotis	= 1
• Unknown bat specie / strain	= 4
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• Total	= 33

“Cryptic” Human Rabies Cases 1990-2005	
• “Cryptic” = no bite known , reported, or documented	
– 2003 human rabies case due to raccoon strain	
• <a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5245a4.htm">http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5245a4.htm</a>	
– 1990-2005 human rabies cases: bats	
• 82 % (27 of the 33 cases)	
• <a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5302a4.htm">http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5302a4.htm</a>	

# 2005 Iowa Rabies Map

## Effective 12/31/2005, MMWR Week 52



Species	Count
Human	0
Bat	60
Bovine	7
Canine	2
Feline	5
Fox	0
Equine	1
Skunk	33
Badger	0
Total	108

Source: Iowa Department of Public Health, Center for Acute Disease Epidemiology

Prepared by: IDPH Bureau of Information Management, GIS Services

